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# (54) Improvements in or relating to apparatus for cooking, serving and/or storing food and the like.

(57) An apparatus for cooking, serving and/or storing food comprises a dish 10 having an open mouth 15 surrounded by a rim 22, and a cover 11 having an opening 34 which is removably disposable on the dish either in a storage position in which the opening 34 is closed by the ledge portion 24 or in a position in which the opening 34 placed over a corner 17 of the open mouth 15 is not closed by the ledge portion 24. In this latter position a hole is provided which acts as a steam vent during cooking, or as a spoon handle rest during storing.

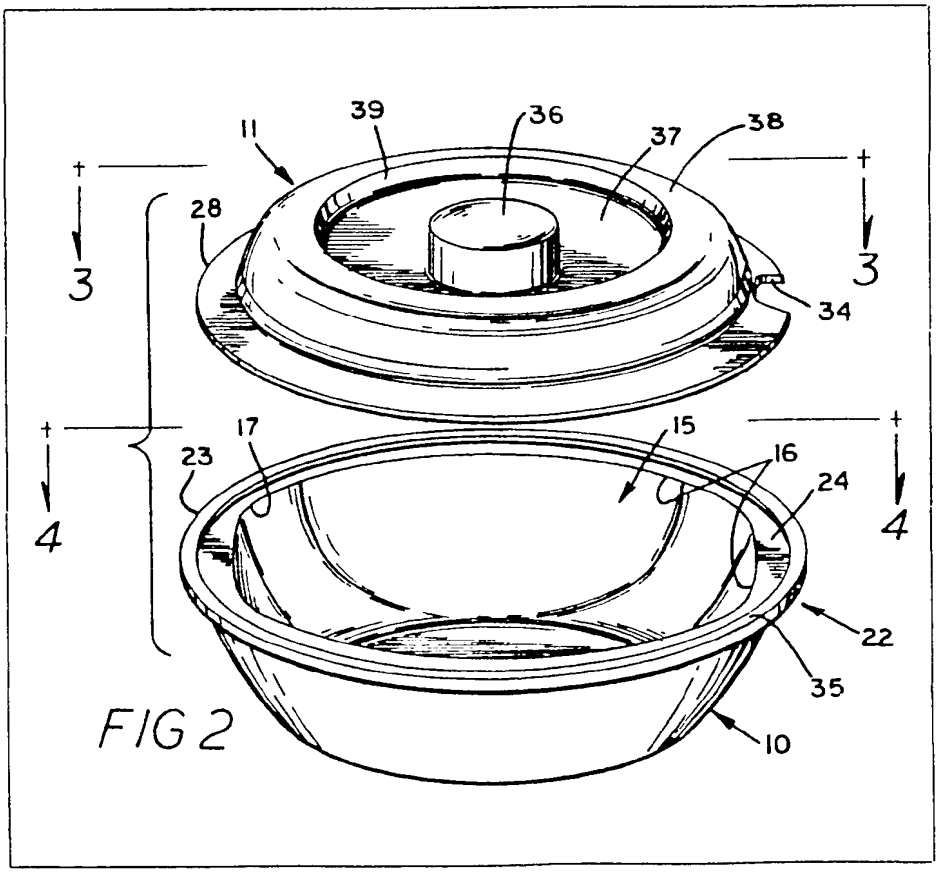


FIG 2

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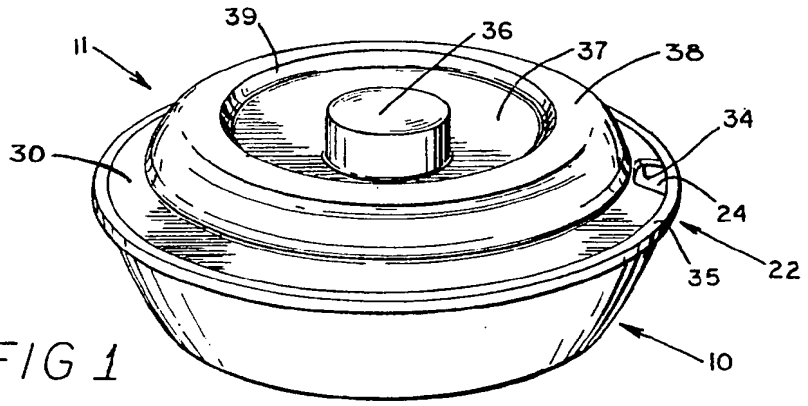


FIG 1

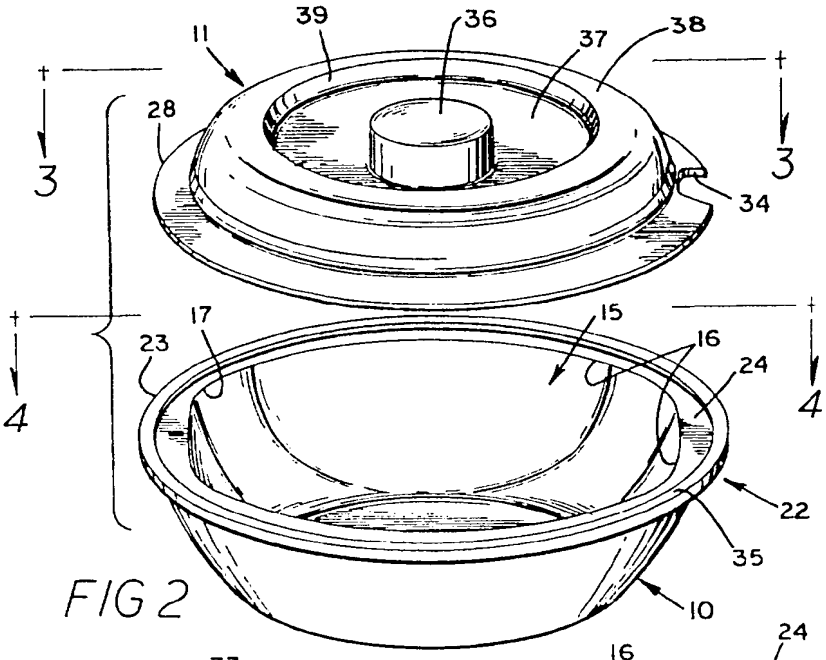


FIG 2

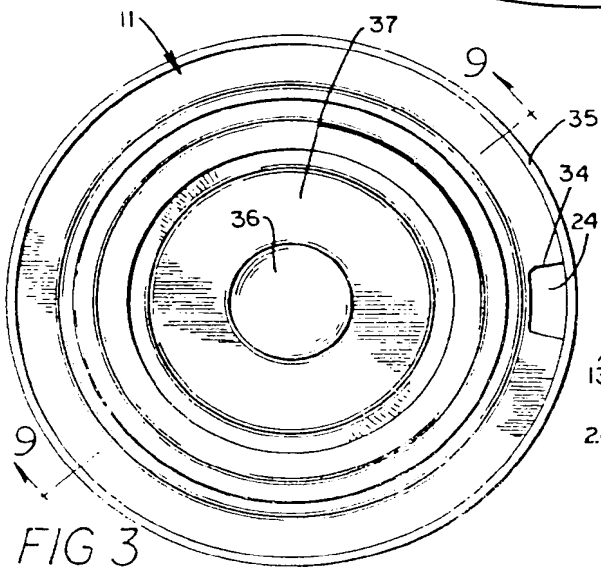


FIG 3

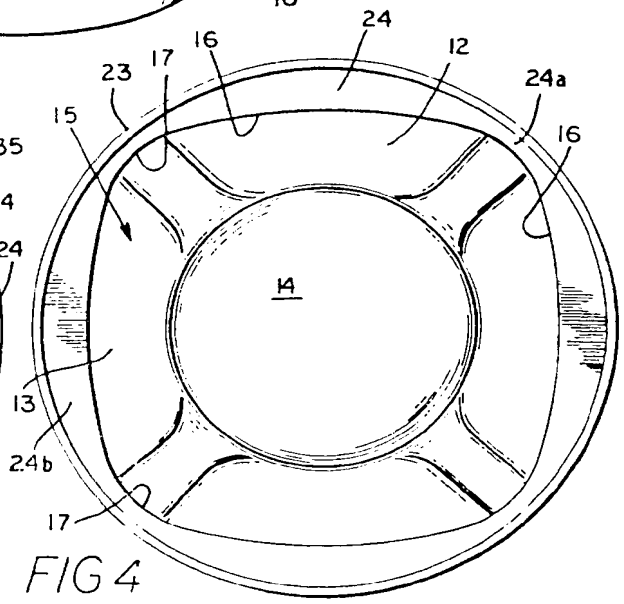


FIG 4

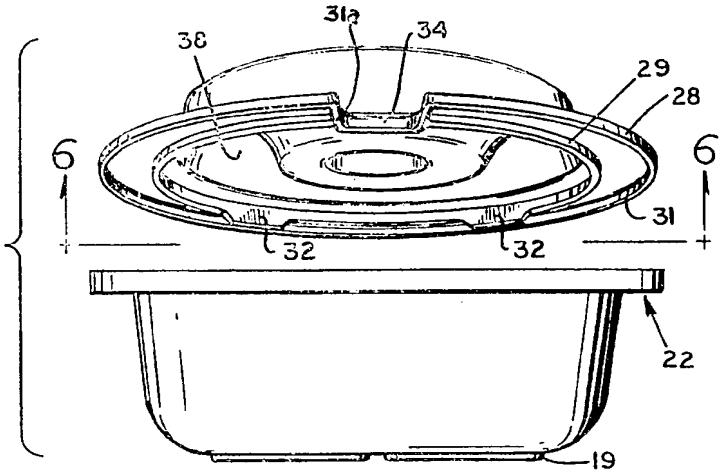


FIG 5

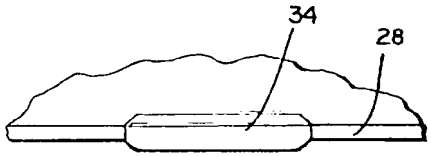


FIG 7

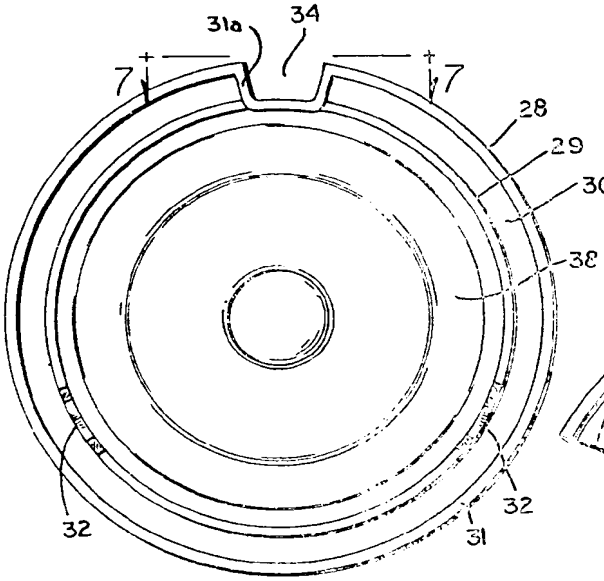


FIG 6

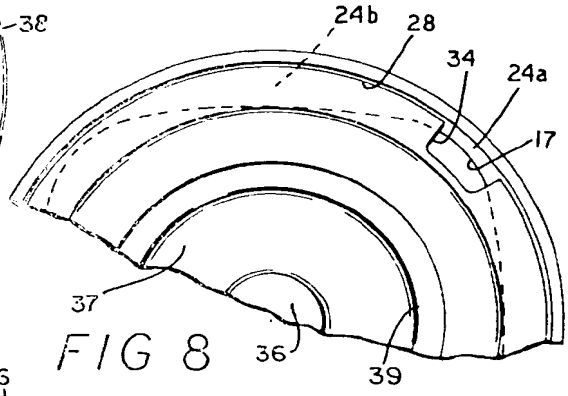


FIG 8

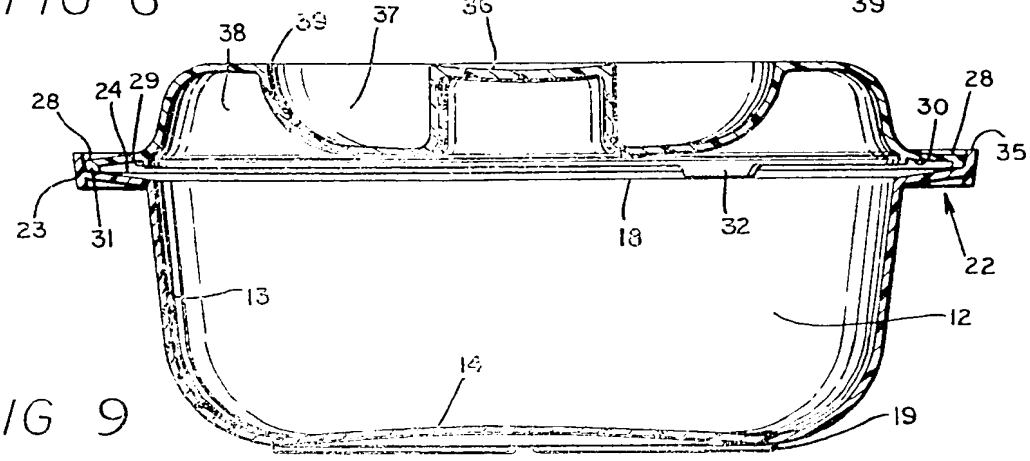


FIG 9

SPECIFICATION

**Improvements in or relating to apparatus for cooking, serving and/or storing food and the like**

This invention relates to apparatus for cooking, serving and/or storing food and the like, and particularly to dish arrangements suiable therefore.

Dishes for use in baking and other cooking applications are typically equipped with a cover so that foodstuffs within the dish can be covered during cooking. Covered cooking helps to retain heat and moisture within the dish and may otherwise aid the cooking process. Even if covered cooking is not desired the cover can be used to help keep the contents of the dish warm prior to serving. When used herein, the term "dish" is intended to include ovenware, such as a casserole dish suitable for use in a microwave oven or a conventional oven, and cooking utensils intended for use on a range-top cooking element.

For some cooking applications, it would be advantageous to provide an opening in an otherwise covered dish to allow carefully controlled amounts of steam or other vapors to escape. Further, while it may be desirable to keep a dish covered during cooking, it is nevertheless frequently desirable to gain access to the interior of the dish during cooking, for example, to insert a cooking thermometer into the dish, preferably without completely removing the cover. While serving it may be convenient to leave a serving spoon in the dish and yet keep the dish covered.

With some cooking dishes of the prior art, one must substantially remove the entire cover or lid in order to gain access to the interior of the dish. This is at best awkward, because the cook must either hold the removed lid in one hand or else must find a clean and heat-safe location on which the hot lid can be temporarily rested. Moreover, removing the lid from a hot container carries the risk that the cook may be burned by a sudden and uncontrolled escape of steam from the container.

The need to provide an opening for venting steam from the dish or for inserting a cooking thermometer has typically been achieved by setting the lid ajar on the dish. The solution is awkward and usually difficult to regulate, and is undesirable. One known venting expedient, usually limited to metal lids for saucepans or the like, uses a separate butterfly valve element removably attached to the cover. Such valves are not adjustable, easily become clogged, are relatively costly and in any case are not readily adaptable to ceramic or glass cookware. Other prior art dishes have located a venting arrangement in the handle of the dish. However, allowing for the escape of steam in this manner can cause problems for a person handling the container. Locating the vent in such a fashion increases the likelihood that steam will condense on the handle making it hot or slippery or both.

The aim of the present invention is at least to mitigate the problems associated with prior art dishes.

The invention provides apparatus for cooking, serving and/or storing food and the like, comprising: a dish having an open mouth; a cover removably disposable on said dish at least in one position substantially to close said open mouth, said cover having an opening therein; and means on said dish for blocking said opening whenever the cover occupies a predetermined closure position on the open mouth of said dish.

Preferably, said cover includes an outer rim for engaging said dish; said opening is formed in said rim; and said blocking means includes a ledge on said dish positioned for blocking alignment with said opening when the cover occupies a predetermined position on the open mouth of the dish.

Desirably, said dish includes a ledge adjacent the periphery of said open mouth, said ledge blocking said opening in the rim of the cover when the cover occupies said predetermined position on said dish and said opening being unblocked when the cover occupies at least one other position on said dish.

Said open mouth is preferably defined by a ledge, said ledge having a contour such that the effective unblocked area of said opening can be adjusted in size by changing the angular position of the cover relative to said contour, and preferably said dish has at least one relatively wide ledge portion extending inwardly of said flange at a first location relative to said flange and at least one relatively narrow ledge portion at another location; said opening being formed in said outer rim for blocking alignment with said ledge when disposed at said first location, and for unblocked communication with the interior of said dish when aligned with said other location.

Thus, the cover and dish may cooperate to form at least one adjustably sized opening which allows access to the interior of the covered dish. The opening can function as an adjustable vent to allow controlled amounts of steam or water vapor to escape from the dish. Desirably, the opening is also sufficiently large to admit an implement such as a cooking thermometer or the shank of a spoon.

In a preferred embodiment the cover includes an outer rim having an opening formed therein. The dish includes a ledge and flange which circumscribe the open mouth of the dish. Portions of the ledge function as handles. When the cover is in place on the dish it can be rotated to at least one relative position wherein the rim of the dish blocks the

opening. The cover can be rotated to at least one other position removed from the handles, wherein the opening is unblocked. Thus access to the interior of the dish can be effected without taking the cover off the dish.

Apparatus of the invention provides a covered cooking dish which allows access to the interior of the dish without removing the cover.

The dish and cover arrangement provides an adjustably sized opening into the interior of the dish, to allow controlled venting. The opening into the interior of the dish is angularly removed from portions of the dish which function as a handle.

In order that the invention may be more readily understood, and so that further features thereof may be appreciated, an embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

*Figure 1* is a top perspective view of an apparatus of the invention;

*Figure 2* is an exploded perspective view of the apparatus of Fig. 1, illustrating the cover elevated above the dish;

*Figure 3* is a top plan view of the apparatus of Fig. 1;

*Figure 4* is a top plan view similar to Fig. 3 but with the cover omitted;

*Figure 5* is a side elevational view of the apparatus of Fig. 1, illustrated with the cover removed and tipped upwardly to show details of the underside thereof;

*Figure 6* is an underneath plan view of the cover, taken along line 6–6 of Fig. 5;

*Figure 7* is a fragmentary view taken along line 7–7 of Fig. 6;

*Figure 8* is a fragmentary top plan view of the apparatus of Fig. 1, illustating an unblocked opening into the dish; and

*Figure 9* is a cross-sectional view of the apparatus taken along line 9–9 of Fig. 3.

Figs. 1 and 2 illustrate a dish 10 having a complementary cover 11. The dish 10 and cover 11 are intended to be used, for example, as a casserole dish or for other cooking purposes. Preferably, the dish 10 and cover 11 are made of any suitable material which can withstand both the high temperatures associated with cooking in an oven or on a range-top and the low temperatures associated with storage in a refrigerator or freezer. For example, the dish and cover may be made from a ceramic glass, metal, plastics or like material.

As best seen in Figs. 2, 4 and 9, the dish 10 has a generally bowl-shaped interior 12 formed by a side wal 13 that is integral with, and extends upwardly from, a bottom wall 14. The bottom wall 14 is slightly convex at the center of the dish. The exterior of bottom wall 14 includes a downwardly extending projection 19 which is generally circular in bottom plan view. The projection 19 is preferably formed by a plurality of spaced segments. The projection(s) serve as a base to support the bowl for example on a flat surface. The dish 10 has an open mouth 15 (Figs. 2 and 4) having the approximate appearance of a square formed by four outwardly-arcuate side portions 16 interconnected by rounded corners 17. The side portions 16 and corners 17 interconnect to form a continuous smooth edge 18 (Fig. 9) defining the open mouth 15 of the dish 10. The continuous smooth edge 18 may be in the form of any other noncircular contour, for example the edge 18 may define an oval mouth 15.

A rim 22 surrounds the open mouth 15 of the dish 10. The upper surface of the rim 22 includes a ledge 24 which extends from the edge 18 of the open mouth 15, and terminates at a generally circular flange 35. As can best be seen in Fig. 9, the ledge 24 angles downwardly from the flange 35 towards the open mouth of the dish 10. The flange 35 angles slightly outwardly and is defined at its outer extremity by an outer surface 23. The generally square shape of the open mouth 15 is circumscribed by the flange 35 of the rim 22. As a result the width of the ledge 24 varies between relatively narrow ledge portions 24*a*, adjacent the corners 17 of the open mouth 15, and relatively wide ledge portions 24*b*, adjacent the side portions 16 of the open mouth 15. As can best be seen in Fig. 4, the relatively wide ledge portions 24*b* form convenient handles for lifting and carrying the dish 10.

As best shown in Figs. 1 and 9, an upper surface of the cover 11 includes a handle 36 centrally located within a surrounding depression 37, so that the handle can be readily grasped, using a "potholder", or any other suitable protective device, when necessary. The perimeter of the depression 37 is defined by an edge 39 which is generally circular in top plan view. A region 38 extends outwardly and downwardly from edge 39 to merge with an outer rim 30, of the cover 11.

The outer rim 30 is defined by a generally circular outer edge 28. As best shown in Figs. 3 and 9, the diameter of the outer edge 28 is slightly smaller than the inside diameter of the dish flange 35 so that when the cover 11 is in place on the dish 10 the flange 35 prevents lateral movement of the cover 11. Outer edge 28 abuts the flange 35 when the cover 11 is tipped to expose the open mouth 15 of the dish 10.

A first lip 29 extends downwardly from the underside of the outer rim 30. The first lip 29 is concentric with the outer edge 28 of the cover 11 so that, when the cover 11 is in place on the dish 10 the lip 29 is disposed approximately above the edge 18 of the dish open mouth 15. A second lip 31 extends downwardly at the outer edge 28 of the rim

30. When the cover 11 is in place on the dish 10, the second lip 31 contacts the ledge 24 of the rim 22 and supports the cover 11 on the dish. A pair of spaced lugs 32 protrude downwardly from lip 29.

A portion of the outer rim 30 of the cover 11 is cut away to form an opening 34 extending inwardly from the outer edge 28 of the cover. The opening 34, as best seen in Fig. 6, extends inwardly to a position slightly short of the lip 29. The opening 34 preferably is sufficiently large to accommodate the shank of an implement (not shown) such as a spoon or a cooling thermometer.

The second lip 31 includes a section 31*a* (Fig. 6) which defines the perimeter of the opening 34. In combination with the lugs 32 the section 31*a* forms a base for supporting the rim 30 slightly above any flat surface upon which the cover 11 is placed. As best shown in Figs. 3 and 5, the lip section 31*a* functions to block completely access to the interior of the dish 10 when the opening is positioned over a ledge portion 24*b*. The portion of lip section 31*a* extending inwardly from edge 28 angles downwardly at approximately the same angle as the ledge 24.

As can be seen from Fig. 8, the opening 34 formed on the outer rim 30 of the cover 11 provides access into the interior of the dish 10 whenever the cover 11 is so positioned with respect to the dish 10 that the opening 34 is aligned with one of the corners 17 of the open mouth 15. The opening 34 thus provides access to the interior of the dish for inserting an implement such as a cooking thermometer. The opening also functions as a vent to permit steam to escape from the interior of the dish. The open mouth 15 of the dish 10 must be shaped to provide at least one location at which an angular placement of the cover 11 on the dish 10 results in opening 34 being unblocked. Since there are four corners 17 in the preferred embodiment, access to the interior of the dish 10 can be accomplished by rotating the cover not more than 45° in any direction.

By rotating the cover 11 relative to the dish 10, the opening 34 of the cover can be moved from a position over the relatively narrow ledge portion 24*a* to a position over the relatively wide ledge portion 24*b*. As best shown in Fig. 3, when the opening 34 is positioned over a ledge portion 24*b* the opening is completely blocked and the interior of the dish becomes inaccessible. Thus the relatively wide ledge portion 24*b* forms a blocking means which effectively obstructs access to the interior of the dish 10. The dish 10 must include at least one relatively wide ledge portion 24*b* so that at least one angular placement of the cover 11 on the dish 10 results in the opening being blocked. Since there are four relatively wide ledge portions 24*b* in the preferred embodiment, the opening 34 can be blocked by rotating the cover nor more than 45° in any direction.

Apparatus of the invention provide various advantages. For example the effective unblocked area of the opening 34 can be adjusted to any position between maximum unblocked and completely blocked by selecting the appropriate angular position of the cover 11 on the dish 10. It should also be noted that at any angular placement of the cover 11 on the dish 10 the outer rim 30 is positioned over the ledge 24. Condensation on the underside of the rim 30 falls on the ledge 24 and is directed towards the open mouth 15 of dish 10.

As mentioned previously, the relatively wide ledge portions 24*b* also facilitates handling of the apparatus, even with the cover in an unblocked position, as in this case the opening 34 is positioned at an angle removed from the relatively wide ledge portions 24*b*. Thus steam escaping from the interior of the dish will not be directed towards the user's hand when the dish is being grasped. It is also less likely that steam will condense in the area of ledge portion 24*b*. The slope of the ledge 24 downward towards the open mouth 15 of the dish also directs condensed steam or other liquid towards the interior of the dish.

## CLAIMS

1. Apparatus for cooking, serving and/or storing food and the like, comprising: a dish having an open mouth; a cover removably disposable on said dish at least in one position substantially to close said open mouth, said cover having an opening therein; and means on said dish for blocking said opening whenever the cover occupies a predetermined closure position on the open mouth of said dish.

2. Apparatus according to claim 1, wherein said cover includes an outer rim for engaging said dish; said opening is formed in said rim; and said blocking means includes a ledge on said dish positioned for blocking alignment with said opening when the cover occupies a predetermined position on the open mouth of the dish.

3. Apparatus according to claim 1, or claim 2, wherein said cover includes a substantially circular outer rim operative to engage the dish at any selected angular placement thereon; and said blocking means is operative to block said opening in said outer rim at least at one predetermined angular placement of said cover.

4. Apparatus according to claim 2 or claim 3, wherein said dish includes a ledge adjacent the periphery of said open mouth, said ledge blocking said opening in the rim of the cover when the cover occupies said predetermined position on said dish and said opening being unblocked when the cover occupies at least one other position on said dish.

5. Apparatus according to claim 2, claim 3 or claim 4, wherein said outer rim acts to support the cover in place on said open mouth.

6. Apparatus according to any one of claims 1 to 5, wherein said open mouth is defined by a ledge, and said ledge has a contour such that the effective unblocked area of said opening can be adjusted in size by changing the angular position of the cover relative to said contour.

7. Apparatus according to claim 6, wherein said dish includes a flange surrounding the periphery of said open mouth to engage and retain said cover on said dish and said ledge is located inwardly of said flange.

8. Apparatus according to claim 6 or claim 7, wherein said dish has at least one relatively wide ledge portion extending inwardly of said flange at a first location relative to said flange and at least one relatively narrow ledge portion at another location; said opening being formed in said outer rim for blocking alignment with said ledge when disposed at said first location, and for unblocking communication with the interior of said dish when aligned with said other location.

9. Apparatus according to claim 1, wherein said dish includes a substantially circular flange surrounding said open mouth, said cover includes an outer rim having an edge, said edge engaging said flange on the dish to retain the cover in place over said open mouth at any of a plurality of angular positions relative to the dish; said dish having at least one relatively wide ledge extending inwardly of said flange at a first location relative to said flange and having at least one relatively narrow ledge of another location; and said opening being formed in said outer rim for blocking alignment with said ledge when disposed at said first location, and for unblocked communication with the interior of said dish when aligned with said other location.

10. Apparatus according to claim 8 or claim 9, wherein said ledge includes at least two oppositely positioned relatively wide portions and at least one relatively narrow ledge portion; said opening being blocked when said opening is positioned over any of said relatively wide ledge portions and said opening being unblocked when said opening is positioned over any said relatively narrow ledge portion.

11. Apparatus substantially as herein described with reference to and as shown in the accompanying drawings.

12. Any novel feature or novel combination of features described herein.

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